

#### The numbers ~ population growth

- 1.5 M -- surface code adopted (1917)
- 3.5 M -- last time code updated (1971)
- 5.6 M -- today
- 7.0 M -- by 2010
- Eastern ≠ Western Washington:
  - economics, total population, and water supply are not similar
  - growth rates are similar

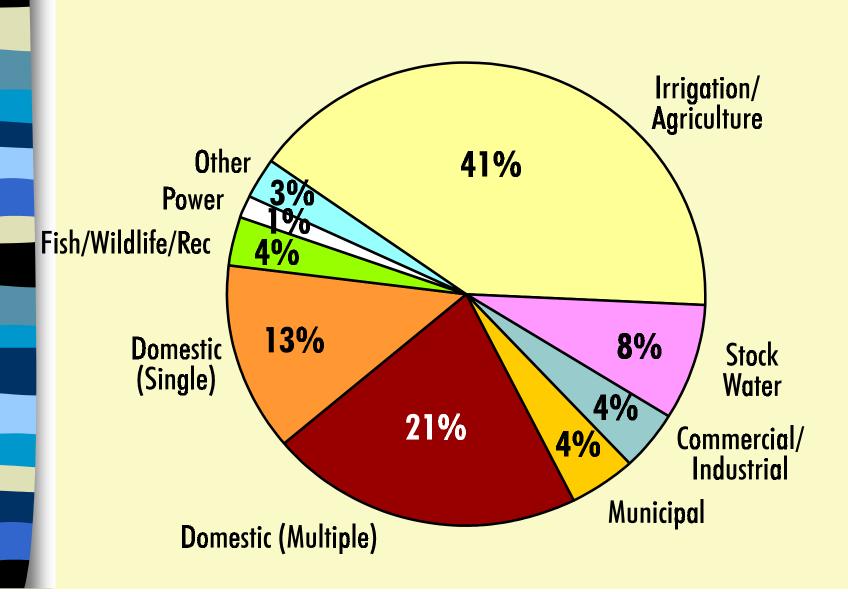


- 16 listed salmon/trout/steelhead runs
- 12 candidate runs
- 16 over-appropriated basins: instream flows critical to recovery
- 10 salmon recovery areas most of the state (all but 1 county)

#### The numbers ~ water rights

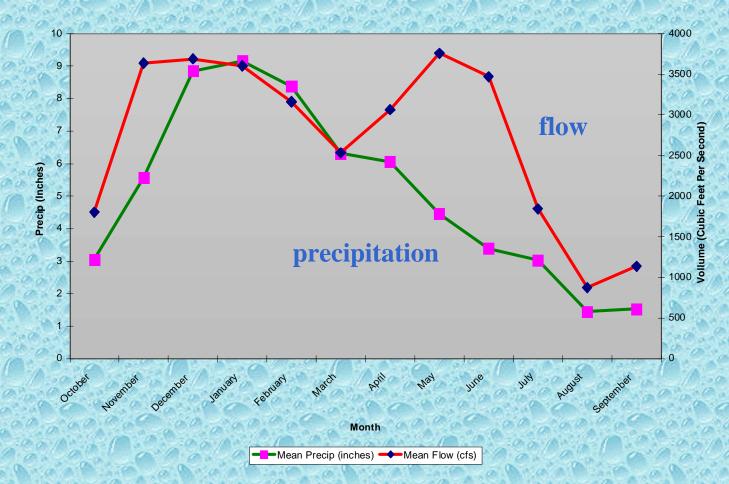
- 7000 water right applications (including 1600 changes)
- 8000 new "exempt" water supply wells drilled each year
- 10,000 certificates for public water supply questioned by case law
- 170,000 unadjudicated water right claims (2/3 of the rights in the state)

#### **Pending Applications**

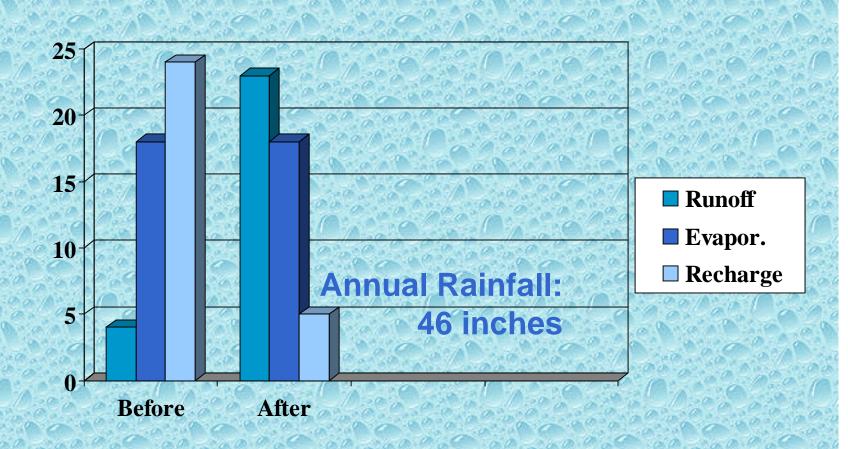


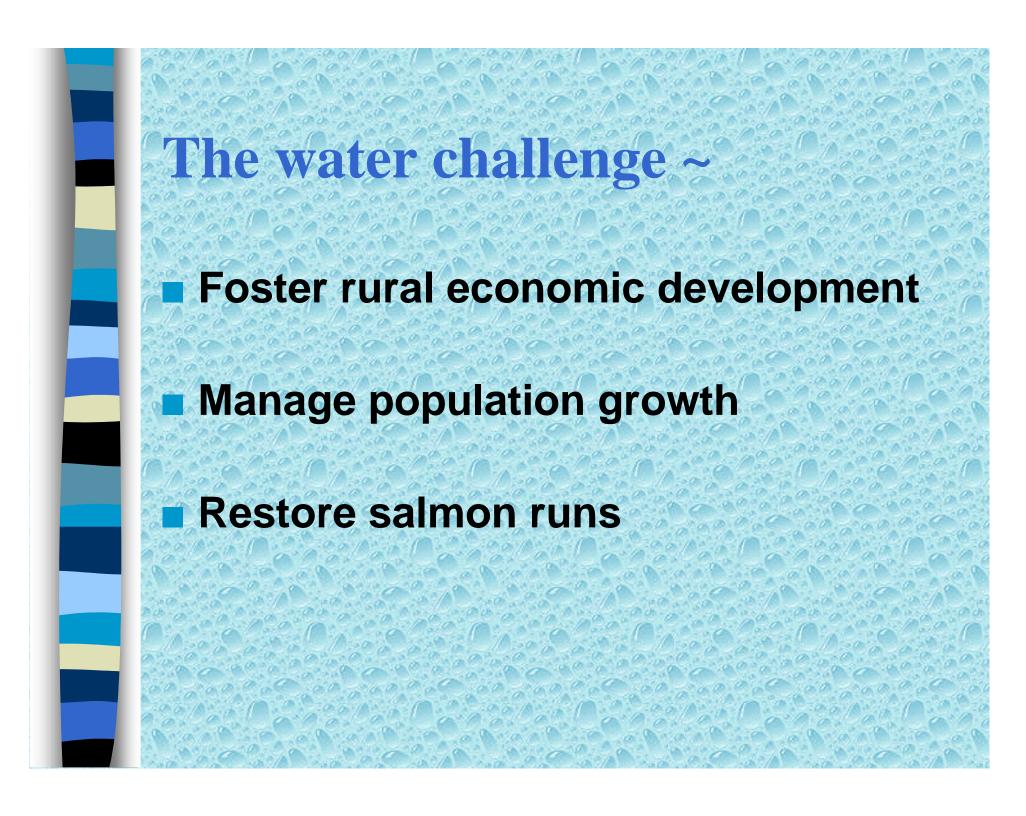
#### Rain and snow affect supplies

Precipitation vs. Instream Flow (Snoqualmie River near Snoqualmie)



# Urbanizing land use ~ changes hydrology





# If you don't have enough ...

- ... you have to "make water" ~
- Water use efficiencies
  - water conservation
  - water reuse
- Move water -- share resources, distribute water to where needed
- Store water -- for when and/or where needed

## A person's right to ...

- Build a dam across state river beds RCW 90.28.170
- Store water for mining/manufacturing RCW 90.16.020
- Store water by condemning inferior use RCW 90.03.040

#### State role

- Plans to control/develop water resources for supply/flood control
- Funding for water supply facilities
- Permits for reservoirs, secondary use of reservoir water, dam safety
- Fees for permits and hydropower
- Rules allowing claims of artificially stored ground waters
- Reservoir permits for underground aquifer storage/recovery projects

### Fish protections

- New storage projects ...
  - consider flows adequate to support food fish and game fish populations (RCW 75.20.050)
  - "full recognition" to established instream flow rights ( RCW 90.22.010)
- "Due regard shall be given to means and methods for protection of fishery resources in the planning for and construction of water impoundment structures and other artificial obstructions." RCW 90.54.020

"It is the policy of the state to promote the use of the public waters in a fashion which provides for obtaining maximum net benefits arising from both the diversionary uses of the state's public waters and the retention of waters within the streams and lakes in sufficient quantity and quality to protect instream and natural values and rights. Consistent with this policy, the state supports economically feasible and environmentally sound development of physical facilities..." RCW 90.03.005

#### Water "fundamentals"

- The development of multipurpose water storage facilities shall be a high priority for programs of water allocation, planning, management, and efficiency
- Multiple-purpose impoundment structures are to be preferred over single-purpose structures. RCW 90.54.020

### Future storage

"Nothing in this act shall be used to prevent future storage options, recognizing that storage may be necessary as a method of conserving water to meet both instream and out-of-stream needs." RCW 90.54.920

## Watershed planning

- Watershed plans <u>shall</u> include strategies to ensure supplies to meet instream and future out-of-stream needs.
- These strategies may include "aquifer recharge and recovery ... or additional water storage and water storage enhancements."

  RCW 90.54.070

